The following listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

1. (Currently Amended): A polymer comprising recurring units of a compound of formula (1):

$$+R^2$$
 $R^3$ 
 $R^1$ 
 $R^1$ 

wherein

A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbo 1 atoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, selected from formulae (3)-1, (3)-2, (3)-3, (3)-4, (3)-5, (3)-6, (3)-7, (3)-8; and (3)-9

R is a single bond, methylene group, oxygen atom, NH group or sulfur atom,  $+ \pi d$   $R^2$  and  $R^3$  each are a single bond or methylene group.

R<sup>5</sup> is a fluorinated alkyl group which optionally contains an ether or ester bond.

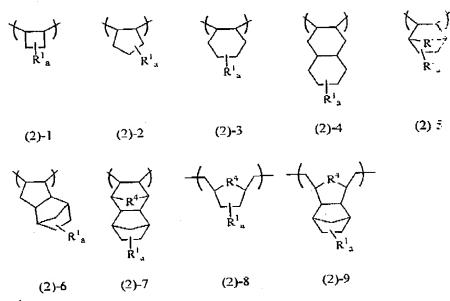
Ro and Rill are, each independently, hydrogen or a straight alkyl group of 1 to 10 carbon atoms,

<sup>&</sup>quot;a" is a positive number of 1 to 3,

R<sup>7</sup> is hydrogen, a straight alkyl group of 1 to 10 carbon atoms, or -C=O-R<sup>12</sup> R12 is hydrogen or a straight alkyl group of 1 to 10 carbon atoms, and R8 is an alkylene proup of 1 to 10 carbon atoms, and either one or both of R<sup>9</sup> and R<sup>10</sup> are alkyl groups of 1 to 5 carbon atoms having at least one fluorine atom substituted thereon.

- (Original): The polymer of claim 1 further comprising recurring units 2. containing acid labile groups.
- (Previously Presented). A chemically amplified resist composition comprising 3. the polymer of claim 1.
- (Previously Presented): A chemically amplified positive resist composition 4. comprising
  - the polymer of claim 1, (A)
  - an organic solvent, and (B)
  - a photoacid generator. (C)
- (Original): The resist composition of claim 4 further commissing a basic õ. compound.
- (Original): The resist composition of claim 4 further comprising a dissolution 6. inhibitor
- (Original): A process for forming a resist pattern comprising the steps of: 7. applying the resist composition of claim 4 onto a substrate to form a cealing, heat treating the coating and then exposing it to high-energy radiation having a wavelength of up to 180 nm or electron beams through a photo mask, and optionally heat treating the exposed coating and developing it with a dia sloper.
  - 8. (Previously Listed as the second Claim 7) (Cancelled)

- 9. (Previously Listed as Claim 8) (Cancelled):
- 10.9. (Currently Amended): A polymer of claim 1, wherein R is a single bond or methylene.
- 11. 10: (Currently Amended): A polymer of claim 1, wherein the recur ing units of formula (1) are selected from formulae (2)-1, (2)-2, (2)-3, (2)-4, (2)-5, (2)-6, (2)-7, (2)-8, and (2)-9



R<sup>4</sup> is a methylene group, oxygen atom, NH group or sulfur atom, and "a" is a positive number of 1 to 3, sand

R+ is-selected from formulae (3) 1, (3) 2, (3) -3, (3) -4, (3) -5, (3) 6, (3) -7, (3) 8, a ,d (3) 9

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R<sup>5</sup> is a fluorinated alkyl group which optionally contains an other or ester bond.

R<sup>6</sup> and R<sup>14</sup> are, each independently, hydrogen or a straight alkyl-group of 1 to 16 varbon atoms,

R<sup>3</sup> is hydrogen, a straight alkyl group of 1 to 10 carbon atoms, or -C=0-R<sup>12</sup>.

R<sup>12</sup> is hydrogen or a straight alkyl group of 1 to 10 carbon atoms, and

R<sup>8</sup> is an alkylene group of 1 to 10 carbon atoms,

wherein either one or both of R<sup>9</sup> and R<sup>14</sup> are alkyl groups of 1 to 5 carbon atoms. It aving at loust one fluoring atom substituted thereon:

12. 11. (Currently Amended): A polymer of claim 1, wherein the recurring units of formula (1) are selected from formulae (2)-1, (2)-2, (2)-3, (2)-4, (2)-5, (2)-6, (2)-7, (2.8, and (2)-9)

(2)-1 (2)-2 (2)-3 (2)-4 (2)-5

$$R^{i}_{a} = R^{i}_{a} = R^{i}_{a}$$

wherein

R4 is a methylene group, oxygen atom, NH group or sulfur atom,

"a" is a positive number of 1 to 3, and

 $R^{1}$  is selected from formulae (3)-1, (3)-2, (3)-3, (3)-4, (3)-5, (3)-6, (3)-7, and (3)-7

R<sup>5</sup> is a fluorinated alkyl group which optionally contains an ether or ester bond, R<sup>6</sup> and R<sup>11</sup> are, each independently, hydrogen or a straight alkyl group of 1 to 10 c<sub>3</sub>, ion atoms, R<sup>7</sup> is hydrogen, a straight alkyl group of 1 to 10 carbon atoms, or -C=O-R<sup>12</sup>, R<sup>12</sup> is hydrogen or a straight alkyl group of 1 to 10 carbon atoms, and R<sup>8</sup> is an alkylene group of 1 to 10 carbon atoms.

13. 12. (Currently Amended): A polymer comprising recurring units of a compound of formula (1).

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, ox gen atom, NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group;

wherein the recurring units of formula (1) are selected from formulae (2)-1 (2)-2, (2)-3, (2)-4, (2)-5, (2)-6, (2)-7, (2)-8, and (2)-9

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wherein

R<sup>2</sup> is a methylene group, oxygen atom, NH group or sulfur atom,

"a" is a positive number of 1 to 3,

R1 is selected from formulae (3)-1, (3)-2, (3)-3, (3)-4, (3)-5, (3)-6, (3)-7, (3)-8, 2 d (3)-9

R<sup>6</sup> and R<sup>11</sup> are, each independently, hydrogen or a smaight alkyl group of 1 to 10 carbon atoms,

 $R^7$  is hydrogen, a straight alkyl group of 1 to 10 carbon atoms, or  $-C=O-R^{12}$ ,  $R^{12}$  is hydrogen or a straight alkyl group of 1 to 10 carbon atoms, and  $R^8$  is an alkylene group of 1 to 10 carbon atoms.

wherein either one or both of R<sup>9</sup> and R<sup>10</sup> are alkyl groups of 1 to 5 carbon atoms having at least one fluorine atom substituted thereon, and

according to claim 10, wherein R<sup>5</sup> is selected from formulae (4)-1, (4)-2, (4)-3, (4, 4, (4)-5, (4)-6, (4)-7, (4)-8, (4)-9, (4)-10 and (4)-11

$$-CF_{3} - CH_{2}CF_{3} - CH_{2}CF_{2}CF_{3} - CF_{2}CF_{2}CF_{3} - \frac{CF_{3}}{CF_{3}} - \frac{CF_{3}}{CF_{3}}$$

$$(4)-1 \quad (4)-2 \quad (4)-3 \quad (4)-4 \quad (4)-5 \quad (4)-6$$

$$-CF_{2}CF_{2}CF_{2}CF_{3} - CF_{2}CF_{2}CF_{2}CF_{2}CF_{3} - CH_{2}CF_{2}CF_{2}CF_{2}CF_{3}$$

$$(4)-7 \quad (4)-8 \quad (4)-9$$

$$-CF_{3} - CH_{2}OCFCF_{3} - CF_{2}OCFCF_{3}$$

$$(4)-10 \quad (4)-11$$

14. 13. (Currently Amended): A polymer of claim 1, further comprising recurring units of a (meth)acrylic compound of formula (5)-1 or (5)-2

R13 is an acid labile group, and

R<sup>14</sup>, R<sup>15</sup> and R<sup>16</sup> are, each independently, a hydrogen atom, fluorine atom, or a stra git, branched or cyclic alkyl group of 1 to 10 carbon atoms, which are, each independently, optionally substituted with fluorine.

15 14. (Currently Amended) A polymer comprising recurring units of a compound of formula (1):

$$+R^{2} \qquad R^{3} + \qquad (1)$$

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, on year atom, NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group.

said compound of claim 1, further comprising recurring units of a styren: compound of formula (6)

$$R^{10} \stackrel{R^{14}}{\underset{R^{15}}{\longleftarrow}}$$

$$R^{17} \stackrel{R^{15}}{\underset{U}{\longleftarrow}} O - R^{13} \stackrel{R^{14}}{\underset{OH_c}{\longleftarrow}}$$

$$(6)$$

wherein

R13 is an acid labile group,

R<sup>14</sup>, R<sup>15</sup> and R<sup>16</sup> are, each independently, a hydrogen atom, fluorine atom, or a snaight, branched or cyclic alkyl group of 1 to 10 carbon atoms, which are, each independently, optionally 10 **KOJIM-393** 

substituted with fluorine,

R17 is a hydrogen atom, fluorine atom, or a straight, branched or cyclic alkyl group of 1 to 10 carbon atoms, which is optionally substituted with fluorine,

b is a positive number of 1 to 5, and

c and d are, each independently, 0 or a positive number of 1 to 4.

16 15 (Currently Amended): A polymer comprising recurring units of a (1) inpound of formula (1):

$$+R^{2} \xrightarrow{R^{1}} R^{3} +$$

$$(1)$$

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms, R1 is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, ox reen atom, NH group or sulfur atom, and R2 and R3 each are a single bond or methylene group.

said compound of claim 1, further comprising recurring units of a norborners compound selected from formulae (7)-1, (7)-2, (7)-3, (7)-4, (7)-5, (7)-6, and (7)-7

$$R^{4}$$
  $R^{4}$   $R^{4$ 

wherein

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 $R^4$  is a methylene group, oxygen atom, NH group or sulfur atom, and  $R^{13}$  is an acid labile group.

17. 16. (Currently Amended): A polymer comprising recurring units of a compound of formula (1):

$$\begin{array}{cccc}
+R^2 & R^3 \\
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wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, oxygen atom, NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group.

said compound of claim-1; further comprising recurring units of a ricyclodecene compound selected from formulae (8)-1, (8)-2, (8)-3, (8)-4, (8)-5, (8)-6, (8)-7,  $(\xi)-8$ , (8)-9, (8)-10, (8)-11, (8)-12, (8)-13, and (8)-14

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wherein

R4 is a methylene group, oxygen atom, NH group or sulfur atom, and R13 is an acid labile group

18. 17: (Currently Amended): A polymer comprising recurring units of a compound of formula (1):

$$+R^{2} \xrightarrow{R} R^{3} +$$

$$R^{1}_{a}$$

$$(1)$$

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, oxigen atom, NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group.

said compound of claim-1, further comprising recurring units of a tetracy lododecene compound selected from formulae (9)-1, (9)-2, (9)-3, (9)-4, (9)-5, (9)-6, and (9)-7

wherein

 $R^4$  is a methylene group, oxygen atom, NH group or sulfur atom, and  $R^{13}$  is an acid labile group.

19. 48. (Currently Amended): A polymer comprising recurring units of a compound of formula (1):

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$$+R^{2} \xrightarrow{R^{1}} R^{3} +$$

$$(1)$$

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbo 1 stoms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, oxygen atom.

NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group.

said compound of claim 1, further comprising recurring units of a maleim c = compound of formula (10)-1 or (10)-2

wherein

R13 is an acid labile group,

R14 is a single bond or an alkylene group of 1 to 10 carbon atoms, and

 $R^{15}$  and  $R^{16}$  are, each independently, hydrogen, fluorine, methyl or trifluoromethy.

20. 19. (Currently Amended): A polymer comprising recurring units of compound of formula (1):

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon, toms, R<sup>1</sup> is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, oxygen atom, NH group or sulfur atom, and R<sup>2</sup> and R<sup>3</sup> each are a single bond or methylene group.

said compound of claim 1, further comprising recurring units of a vinyl alcohol compound of formula (11)

$$\begin{array}{c}
R^{16} \stackrel{R^{14}}{\longrightarrow} R^{15} \\
\stackrel{\circ}{\longrightarrow} R^{13}
\end{array}$$
(11)

wherein

R13 is an acid labile group, and

R<sup>14</sup>, R<sup>15</sup> and R<sup>16</sup> are, each independently, a hydrogen atom, fluorine atom, or a straight, branched or cyclic alkyl group of 1 to 10 carbon atoms, which are, each independently, optionally substituted with fluorine.

- 21 20. (Currently Amended): A polymer according to claim 1, wherein sa a polymer has having a weight average molecular weight of 1,000 to 1,000,000.
- 22. 21. (Currently Amended): In a process of preparing a polymer, the improvement wherein a monomer of formula (1) of claim 1 is used.
- 23. 22. (Currently Amended): In a process of forming a resist composition or a resist pattern, the improvement wherein a polymer of claim 1 is used.

- 24. (New). A chemically amplified positive resist composition comprising

  (A) a polymer comprising recurring units of a compound of femala (1):
  - $\begin{array}{cccc}
    +R^2 & R^3 + R^3 +$

wherein A is a divalent aliphatic or alicyclic hydrocarbon group of 2 to 20 carbon atoms,  $R^1$  is an alkyl group containing at least one fluorine atom, and which optionally contains a hetero atom, "a" is a positive number of 1 to 3, R is a single bond, methylene group, oxygen atom, NH group or sulfur atom, and  $R^2$  and  $R^3$  each are a single bond or methylene group,

- (B) an organic solvent,
- (C) a photoacid generator, and
- (D) a dissolution inhibitor.
- 25. (New). A polymer of claim 1, wherein R<sup>1</sup> is selected from formulae (3)-1, (3)-2, (3)-3, (3)-4, (3)-5, (3)-6, (3)-7, and (3 -7)

$$R_{s}$$
  $R_{s}$   $R_{s$ 

R<sup>5</sup> is a fluorinated alkyl group which optionally contains an ether or ester bond R<sup>6</sup> and R<sup>11</sup> are, each independently, hydrogen or a straight alkyl group of 1 to 10 carbon atoms, R<sup>7</sup> is hydrogen, a straight alkyl group of 1 to 10 carbon atoms, or -C=O-R<sup>12</sup>, R<sup>12</sup> is hydrogen or a straight alkyl group of 1 to 10 carbon atoms, and

R<sup>8</sup> is an alkylene group of 1 to 10 carbon atoms.

- 26. (New): A polymer according to claim 25, further comprising recurring units containing acid labile groups.
- 27. (New): A chemically amplified resist composition comprising a posymer according to claim 25.
  - 28. (New): A chemically amplified positive resist composition comprising
    - (A) the polymer of claim 25,
    - (B) an organic solvent, and
    - (C) a photoacid generator.
- 29. (New): A resist composition according to claim 28, further commissing a basic compound
- 30. (New): A resist composition according to claim 28, further comprising a dissolution inhibitor.
- 31. (New): A process for forming a resist pattern comprising the steps of: applying a resist composition according to claim 28 onto a substrate to 10 m a coating, heat treating the coating and then exposing it to high-energy radiction having a wavelength of up to 180 nm or electron beams through a photo mask, and optionally heat treating the exposed coating and developing it with a developer.
  - 32. (New): A polymer of claim 25, wherein R is a single bond or methylene.
- 33. (New): A polymer of claim 1, wherein the recurring units of in mula (1) are selected from formulae (2)-1, (2)-2, (2)-3, (2)-4, (2)-5, (2)-6, (2)-7, (2)-8, and (2)-9

 $R^4$  is a methylene group, oxygen atom, NH group or sulfur atom, and "a" is a positive number of 1 to 3